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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/517,991

03/02/2005

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EXAMINER

MUSSER, BARBARA J

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/517,991	Applicant(s) LEVAVASSEUR, JEAN-LUC J L L	
	Examiner BARBARA J. MUSSER	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/21/08 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-3 and 6-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant has not described how E is determined such that one in the art would be able to determine if they were infringing on the claim as applicant's specification states that E is experimentally determined(Pg. 5, ll. 29-30) and is dependent on a number of variables. This claim appears to require undue experimentation to know the meets and bounds of the claim and therefore is not enabled(MPEP 2164) as E varies for every shape and thus the breadth of the claims

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varies, applicant has not provided direction as to how E is determined other than by experiment, and there are no working examples showing how E is determined. This appears to require a substantial amount of experimentation.(Factors A, F, G, H in MPEP 2164.01(a))

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-3 and 6-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, it is unclear what is meant by the new language in the claim as it suggests that the honeycomb is positioned in the mold before the septum has contact with itself, but earlier language in the claim indicates the septum parts abut each other and therefore the surfaces would not contact. For the purposes of examination, this claim is considered to require that the septum has its surface precoated with an adhesive which has adhesive strength at the moment the parts are applied to the honeycomb.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 1-3 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Syed(U.S. Patent 6,203,656) in view of Williamson et al.(U.S. Patent 4,534,813) and Blackwell.(U.S. Patent 5,073,457)

Syed discloses a method for making an acoustic panel by stacking a porous acoustic skin(Col. 2, ll. 29), a primary honeycomb(16), a multi-perforated septum(Col. 2, ll. 60-62) which can be made of fiberglass impregnated with resin(Col. 3, ll. 43-45), a secondary honeycomb(18), and an impermeable skin(24) on a mold, applying transverse pressure(Col. 3, ll. 17-20), and curing them to bond them together in the desired shape. The reference does not disclose forming the septum by applying separate parts to the honeycomb on the mold such that they abut each other so as to approximate the final shape. Williamson et al. discloses forming a complex curvature to a fabric(Col. 1, ll. 12-13) by mapping the surface and cutting several shapes which are pieced together abutting to form the final shape.(Abstract) It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the septum of Syed from multiple parts which are applied to the surface of the honeycomb so that the septum would accurately fix the complex curvature of the article,(Col. 1, ll. 12-14, 44-47) thus using a known technique to improve a similar article in the same way. While Syed does not explicitly disclose the porous acoustic skin is perforated, one in the art would appreciate that since the skin is porous, it effectively has a multitude of holes. Additionally, the reference indicates skin has a conventional configuration(Col. 2, ll. 30), and since such skins are conventionally perforated, it would be perforated. As to the error E, one in the art would appreciate that since creases would not be desirable, one

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in the art would appreciate that a minimum distance between the septum and honeycomb would be desired and would use the appropriate number of septum sections to insure this. As applicant's claim indicates that below E, creases and tearing do not occur, reducing the distance between the septum and the honeycomb to prevent creasing and tearing would effectively bring the maximum error below E.

As to the limitation of an adhesive being present on the septum which allows the components to be moved, Blackwell discloses an adhesive which allows placement of an article and allows it to be adjusted until one is satisfied with the placement. (Col. 2, ll. 1-5) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a repositionable adhesive such as that of Blackwell on the septum components since this would allow placements of the components and their adjustment until the optimal placement is determined. (Col. 2, ll. 1-5)

Regarding claim 2, one in the art would appreciate that the least number of septum pieces would be used.

Regarding claim 7, Syed discloses the septum can be pre-perforated (Col. 2, ll. 66)

Regarding claim 9, one in the art would appreciate that the septum could be perforated before or after cutting to the desired shapes, and these are obvious alternatives in the art. Additionally, it would have been obvious to one of ordinary skill in the art at the time the invention was made to perforate after cutting since perforations would not be made in areas which would later be discarded as scrap.

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Regarding claim 10, Syed discloses the septum is fiber reinforced material in a resin matrix.(Col. 3, ll. 43-44) It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the septum of glass fiber fabric impregnated with resin since this would be an easy way to include fiberglass reinforcement as is known in the art and to use epoxy since epoxy is a well-known and conventional curable resin for use in pre-pregs.

8. Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Syed, Williamson et al., and Blackwell.

The admitted prior art discloses a method for making an acoustic panel by stacking a multi-perforated acoustic skin, a primary honeycomb, a multi-perforated septum made of fabric impregnated with resin, a secondary honeycomb, and an impermeable skin together(Pg. 2, ll. 35- Pg. 3, ll. 11) The reference does not disclose the exact curing process. Syed discloses layering the material up on a mold, applying transverse pressure(Col. 3, ll. 17-20), and curing them to bond them together in the desired shape. The reference does not disclose forming the septum by applying separate parts to the honeycomb on the mold such that they abut each other so as to approximate the final shape. Williamson et al. discloses forming a complex curvature to a fabric(Col. 1, ll. 12-13) by mapping the surface and cutting several shapes which are pieced together abutting to form the final shape.(Abstract) It would have been obvious to one of ordinary skill in the art at the time the invention was made to lay everything up on the mold to form the final product since Syed discloses making a similar product using a mold and to make the septum of the admitted prior art from multiple parts which

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are applied to the surface of the honeycomb so that the septum would accurately fix the complex curvature of the article (Col. 1, ll. 12-14, 44-47) thus using a known technique to improve a similar article in the same way. As to the error E, one in the art would appreciate that since creases would not be desirable, one in the art would appreciate that a minimum distance between the septum and honeycomb would be desired and would use the appropriate number of septum sections to insure this. As applicant's claim indicates that below E, creases and tearing do not occur, reducing the distance between the septum and the honeycomb to prevent creasing and tearing would effectively bring the maximum error below E.

As to the limitation of an adhesive being present on the septum which allows the components to be moved, Blackwell discloses an adhesive which allows placement of an article and allows it to be adjusted until one is satisfied with the placement. (Col. 2, ll. 1-5) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a repositionable adhesive such as that of Blackwell on the septum components since this would allow placements of the components and their adjustment until the optimal placement is determined. (Col. 2, ll. 1-5)

Regarding claim 4, while the references do not disclose the septum is coated with adhesive, one in the art would appreciate that since multiple parts are being laid up on a surface, the parts could move relative to one another. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an adhesive on the septum of the admitted prior art, Syed, and Williamson et al. to keep the septum parts in place relative to one another when they are placed on the honeycomb and to

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make the adhesive have strength the moment it contacts the honeycomb to keeps the parts from moving relative to one another.

Regarding claim 5, one in the art would appreciate that the adhesive would allow movement of the parts after placement to allow them to be shifted to best fit the honeycomb so as to cover the most surface of the honeycomb.

Regarding claim 6, since the holes in the septum as intended to remain open, one in the art would appreciate that they would be checked for blockage by the adhesive prior to assembly.

Response to Arguments

9. Applicant's arguments filed 11/21/08 have been fully considered but they are not persuasive.

Regarding applicant's argument that examiner focuses only on the tearing to determine E, the claims only require that the distance E between the septum and the honeycomb be minimized to prevent tearing.

Regarding applicant's argument that E is a complex variable dependent on a number of factors, that may be true, but applicant has not provided any method of determining E other than by experimentation. E as claimed is simply the maximum distance between the septum and the honeycomb which would still allow the article to function as desired. Applicant has provided no equation or relation of the supposed components of E such that one in the art would know what would meet the claim. Currently, the claim only requires that the maximum distance be such that tearing does not occur, not that a minimum percentage of the cells be fully covered by the septum or

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that the septum pieces be of a minimum size. If E is indeed a complex variable which is only determined experimentally, how does one in the art know when they have determined E for a given shape, or what value of E meets the claim limitation? If examiner took the complicated three-dimensional shape in Figure 5 of Williamson as that of a honeycomb to be covered by a septum, how would one in the art know what value of E would cause them to infringe? If the septum was made of 3 pieces and covered 95% of the cells but a couple of the pieces tore or creased while still covering at least 90% of the cells would it meet the claim? If 15 pieces were used and they covered 90% of the cells and none of them tore, would they meet the claim? What about 25 pieces and 80% coverage? Determination of the scope of a claim should not require undue experimentation but applicant states E is experimentally determined. (MPEP 2164) If this is not undue experimentation, that suggests one in the art would know how to do it, and that this type of experimentation would have been within the scope of knowledge of one in the art. If E is not solely the maximum distance between the septum and honeycomb beyond which tearing can occur, then how much tearing is acceptable? At what point does the amount of tearing and creasing become less important than the number of pieces to make the septum? How does one in the art balance the number of pieces used in the septum and the amount of tearing? Would a certain amount of tearing still allow the method to meet the claim limitation if it reduced the number of pieces used to make the septum? Applicant has argued that there is a delicate balancing act (optimal compromise) between the number of pieces used to

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make the septum and other factors but has not provided any direction as to how to determine the range of numbers that would meet applicant's claim.

Regarding the septum being coated with a repositionable adhesive not being taught in the art, examiner has cited a reference, Blackwell, which shows that repositionable adhesives which allow adjustment of the location of the article are known in the art. The use of such adhesive is Post-It® notes is extremely well-known and examiner did not realize applicant needed a reference to show that such adhesives are known in the adhesive arts, but has now provided one.

Regarding applicant's argument that one in the art would not have been willing to forgo some amount of noise absorption, changes to an article often result in trade-offs. If no one in the art would accept a decrease in noise reduction, why would applicant or applicant's purchasers accept it? Clearly because this decrease in one property would allow for an improvement in another category. As applicant has stated, decisions are made which result in trade-offs to optimize desired properties.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BARBARA J. MUSSER whose telephone number is (571)272-1222. The examiner can normally be reached on Monday-Thursday; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571)-272-1226. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BJM

/B. J. M./

Examiner, Art Unit 1791

/Richard Crispino/

Supervisory Patent Examiner, Art Unit 1791